

## CHAPTER 11

### PCB MANAGEMENT ASHORE

#### 11-1 Scope

This chapter identifies requirements and responsibilities applicable to the prevention of pollution from polychlorinated biphenyls (PCBs) at Navy shore facilities within the United States, Commonwealth of Puerto Rico, Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Marianas Islands. Chapter 18 provides Navy policy with respect to activities in foreign countries.

##### 11-1.1 References.

- a. 40 CFR 750-761, EPA Regulations for Controlling PCBs;
- b. Naval Facilities Engineering Service Center (NFESC) 20.2-028C, PCB Program Management Guide; (NOTAL)
- c. DOD Directive 4140.1 of 4 January 1993, Material Management Policy; (NOTAL)
- d. DOD Directive 4001.1 of 4 September 1986, Installation Management (NOTAL).

#### 11-2 Legislation

**11-2.1 Toxic Substances Control Act (TSCA).** TSCA generally bans the use, manufacture, processing, and distribution in commerce of PCBs. TSCA and the PCB regulations also strictly regulate the marking, storage, and disposal of PCBs. Regulations issued under TSCA require generator identification numbers and the manifesting of PCB wastes. Some States regulate PCBs more stringently than the Federal program, including the regulation of PCBs at concentrations less than 50 parts per million (ppm) or regulation of PCBs as hazardous waste.

#### 11-3 Terms and Definitions

**11-3.1 Capacitor.** A device for accumulating and holding a charge of electricity, consisting of conducting surfaces separated by a dielectric. Types of capacitors are as follows:

- a. **Small Capacitor.** A capacitor that contains less than 1.36 kg (3 lbs) of dielectric fluid.
- b. **Large, High Voltage Capacitor.** A capacitor that contains 1.36 kg (3 lbs) or more of dielectric fluid and operates at 2,000 volts (ac or dc) or above.
- c. **Large, Low Voltage Capacitor.** A capacitor that contains 1.36 kg (3 lbs) or more of dielectric fluid and operates below 2,000 volts (ac or dc).

**11-3.2 In or Near Commercial Buildings.** Within the interior of, on the roof of, attached to the exterior wall of, in an adjacent parking area serving, or within 30 meters of a non-industrial, non-substation building. Commercial buildings include:

- a. Civilian or Navy personnel assembly buildings
- b. Educational properties
- c. Institutional properties (including museums, hospitals, or clinics)
- d. Residential properties (living quarters)
- e. Stores
- f. Office buildings (including administrative buildings)
- g. Transportation centers (including airport terminal buildings, bus stations, or train stations).

**11-3.3 Non-PCB Transformer.** Any transformer that contains less than 50 ppm PCB; except that any transformer that has been converted from a PCB transformer or a PCB-contaminated transformer cannot be classified as a non-PCB transformer until reclassification has occurred per the requirements of reference (a).

**11-3.4 PCB or PCBs.** Any chemical substance, limited to the biphenyl molecule, that has been chlorinated to varying degrees or any combination of substances that contain such substance. Prior to stringent regulation of PCBs, PCBs were used in a variety of applications as a fire retardant and for other purposes such as sound insulating felt in submarines and electrical cables. Often, PCBs were added in these applications without being specified in material or equipment procurement specifications; thus, the presence of PCBs cannot always be determined through review of applicable procurement documents. In the disposal of materials and components, care should be taken to identify all potentially hazardous substances and carry out the disposal accordingly.

**11-3.5 PCB Article.** Any manufactured article, other than a PCB container, that contains PCBs and whose surface(s) has been in direct contact with PCBs. This includes capacitors, transformers, electric motors, pumps, pipes, and any other manufactured items.

**11-3.6 PCB Article Container.** Any package, can, bottle, bag, barrel, drum, tank, or other device used to contain PCB articles or PCB equipment and whose surface(s) have not been in direct contact with PCBs.

**11-3.7 PCB Container.** Any package, can, bottle, bag, barrel, drum, tank, or other device that contains PCBs or PCB articles and whose surface(s) has been in direct contact with PCBs.

**11-3.8 PCB-Contaminated Electrical Equipment.** Any electrical equipment including, but not limited to, transformers, capacitors, circuit breakers, re-closers, voltage regulators, switches, electromagnets, and cable that contain 50 ppm or greater PCB but less than 500 ppm PCB.

**11-3.9 PCB Equipment.** Any manufactured item, other than a PCB container, that contains a PCB article or other PCB equipment. This may include appliances, electronic equipment, and fluorescent light ballasts and fixtures.

**11-3.10 PCB Item.** Any PCB article, PCB article container, PCB container, or PCB equipment that deliberately or unintentionally contains any PCB or PCBs at 50 ppm or greater.

**11-3.11 PCB Leak.** Any instance in which a PCB item has any PCB on any portion of its external surface or surroundings.

**11-3.12 PCB Transformer.** Any transformer that contains 500 ppm or greater PCB. The transformer classifications are:

- a. <50 ppm Non-PCB Transformer.
- b. 50-499 ppm PCB Contaminated Transformer.
- c. ≥500 ppm PCB Transformer.

**11-3.13 PCB Waste Generator.** Any person whose act or process produces PCBs that are regulated for disposal or whose act first causes PCBs or PCB items to become subject to disposal requirements or who has physical control over the PCBs when a decision is made that the use of the PCBs has been terminated.

**11-3.14 Quantifiable Level/Level of Detection.** For PCB analysis, quantifiable level/level of detection means 2 micrograms/gram (2 ppm) from any resolvable gas chromatographic peak.

**11-3.15 Totally Enclosed Manner.** Any manner that will ensure no exposure of human beings or the environment to any concentration of PCBs.

## **11-4 Requirements**

**11-4.1 General.** Except as authorized in reference (a), EPA regulations ban the use of PCBs in any manner other than totally enclosed.

## **11-5 Navy Policy**

### **11-5.1 Compliance with PCB Management Requirements**

**a. Navy Activities.** Navy activities shall comply with the requirements of reference (a) and applicable State and local PCB management requirements. Reference (b) is designed to assist Navy activities in complying with the Federal regulations governing PCBs. In addition, Navy activities shall observe the following:

(1) **PCB Materials.** All items or materials containing PCBs or suspected of containing PCBs shall be considered regulated unless exempt by regulation. PCBs may exist in older Navy electrical equipment and hydraulic and lubricating oils, subject to the restrictions in reference (a). The Naval Sea Systems Command (NAVSEASYS COM) has established appropriate authorizations and controls for these materials on board Navy vessels and has issued material control requirements as NAVSEA PCB Advisories. In addition to Federal, State, and local requirements, perform all repair, removal, handling, storage, and disposal of PCB materials in accordance with applicable NAVSEA PCB Advisories.

(2) **PCB Spills.** Federal regulations list PCBs as a Hazardous Substance. A spill of a reportable quantity of "pure PCB" shall be immediately reported as required by regulation (see Chapter 10). Use the PCB concentration of the spilled material, the amount of material spilled, and the density of the particular type of PCB (if unknown, assume 10 lbs/gallon) to calculate the quantity of "pure PCB" spilled. The

National Contingency Plan (NCP) requires the reporting of all spills involving 1 pound or more PCBs to the National Response Center (NRC) at 1-800-424-8802. Report spills that directly contaminate surface water, sewers, drinking water supplies, grazing lands, or vegetable gardens to the appropriate EPA regional office within 24 hours. States, particularly those that regulate PCBs as a hazardous material/hazardous waste (HM/HW), may have a more stringent reporting requirement. Regardless of the reporting requirement, all PCB spills shall be cleaned up per reference (a). The Federal PCB Spill Cleanup Policy presented in reference (a) applies to spills of PCBs (50 ppm or greater) that have occurred since 4 May 1987. Spills that occurred before 4 May 1987 are subject to the self-implementing cleanup provisions of reference (a) or requirements established at the discretion of the EPA or other authorized cleanup authority.

(3) Contractors. Activities shall ensure that contractors performing work for the Navy on Navy property comply with all applicable PCB requirements while on-site, including Navy requirements.

**11-5.2 Navy and Defense Logistics Agency (DLA) Interface on PCBs.** Reference (c) designates DLA's Defense Reutilization Marketing Service (DRMS) as the responsible agency for worldwide disposal of all PCBs and PCB items. Navy installations shall use the DRMS PCB contract disposal services as much as economically and operationally feasible. However, when necessary to obtain the combination of quality, responsiveness, and cost that best satisfies installation requirements, Navy installations may use other appropriate contract authority to procure PCB disposal services as reference (d) permits. An installation using PCB disposal contract services other than DRMS shall ensure the contract requirements comply with Federal, State, and local PCB regulations; verify contract requirements and contract quality control procedures are at least as stringent as those used by DRMS; and, obtain concurrence by their major claimant.

**11-5.3 PCB Transformers in Commercial Buildings.** Register PCB transformers in commercial buildings with the building owner. Register PCB transformers in or near commercial buildings with owners of all buildings located within 30 meters of the PCB transformer(s). For Navy installations, compliance with the requirement is adequate if PCB transformers in or near commercial buildings are registered as follows:

- a. For Navy tenants, with the organization that prepares fire evacuation plans.
- b. For non-Navy tenants, with the tenant host.

**11-5.4 Navy PCB Equipment Removal Policy.** Navy policy is to eliminate PCBs from all Navy-owned electrical distribution systems and equipment, hydraulic fluids, and cooling and lubricating oils to the maximum extent practicable. The following procedures shall be followed:

a. **Transformers:**

(1) Determine by EPA-approved method, the PCB concentration for all pad mounted and pole mounted transformers. Transformers shall be marked according to classification: the M<sub>L</sub> mark for PCB transformers, a tag showing PCB concentration and sample identification number for PCB-contaminated transformers, or a label indicating non-PCB. Activity records shall note the PCB test results (in ppm) for each transformer.

(2) By October 1998, eliminate all transformers containing 500 ppm or more PCBs. By October 2003, eliminate all transformers containing 50 ppm or more PCBs. To reduce future potential liabilities,

transformer elimination shall be accomplished by replacement or removal with load transfer to non-PCB transformers. Retrofill is an acceptable alternative to replacement for transformers when it has a clear economic benefit (typically transformers in good condition, less than 25 years old, and 300 kilo-volt-ampere (KVA) or larger), and for those transformers that are difficult or impossible to replace due to the constraints of their physical location.

**b. Capacitors:**

(1) Establish an accurate inventory of high and low voltage capacitors based on manufacturing information. Mark large capacitors established to contain PCBs over 50 ppm as PCB contaminated and label each with the sample ID number and concentration. Mark large capacitors established as not containing PCBs as non-PCB. Activity records shall note the PCB classification of each large capacitor.

(2) By October 1998, eliminate all Large Low and High Voltage Capacitors containing PCBs.

**c. PCB Elimination Plan:**

(1) All activities shall prepare a plan for the elimination of PCBs and PCB-contaminated material from all transformers, capacitors, and associated electrical equipment; and hydraulic and lubricating fluids. The plan shall include the proposed date of removal and the requested source of funding for each PCB item. Transformer and capacitor owners shall prioritize corrective projects based on risk and impact to mission if a fire, explosion, or major PCB spill were to occur and the likelihood of such an incident occurring. Transformer and capacitor owners shall coordinate priorities with impacted customers. Pay special attention to the redesign of the power grid to accommodate PCB removal.

(2) Submit activity PCB Elimination Plans to major claimants for review and approval via the cognizant NAVFACENGCOM Environmental Field Division (EFD). Update PCB Elimination Plans annually by 31 May until all regulatory requirements and Navy goals concerning the elimination of PCBs are met.

**d. Procurement.** All future procurement of transformers or any other equipment containing dielectric or hydraulic fluid shall be accompanied by a manufacturer's certification that the equipment contains no detectable PCBs (less than 2 ppm) at the time of shipment. Newly procured transformers and equipment no longer require permanent labels stating they are PCB-free (no detectable PCBs); however, activities may find it useful to mark the items non-PCB for inventory purposes.

## **11-5.5 Training**

a. Every person who repairs, maintains, replaces, inventories, or tests PCB, PCB-contaminated or suspected PCB articles and their immediate supervisors shall receive applicable NAVOSH Worker Right-to-Know Training on hazardous materials; shall receive job specific training on marking, inventorying, reporting, inspection, and spill reporting on PCBs; and, shall receive job specific training regarding additional requirements specific to their installation.

b. Every person involved in PCB program management at naval shore facilities shall receive general environmental overview training specified in Chapter 24 of this instruction; shall receive specific comprehensive training on Federal, State, and local PCB regulations related to their job assignment; and, shall be familiar with the provisions of this chapter.

c. Environmental professionals at COMNAVFACENGCOM and EFDs/Engineering Field Activities (EFAs), Navy Regional Environmental Coordinators, major claimant and type commander environmental staffs, and legal environmental staff shall receive general environmental overview training specified in Chapter 24 of this instruction, introductory or executive overview training in PCB management, and shall be familiar with the provisions of this chapter.

d. Maintain training records and documentation as required by Federal, State, and local regulations.

## **11-6 Responsibilities**

### **11-6.1 COMNAVFACENGCOM shall:**

a. Provide technical assistance to commands in complying with applicable Federal, State, and local PCB requirements.

b. Evaluate alternatives to the use of PCBs in existing PCB equipment and transformers and provide such information to appropriate commands and activities.

c. Make necessary changes to facility design criteria and operating instructions to incorporate Federal, State, and local regulations regarding PCBs and PCB items.

**11-6.2 COMNAVSUPSYSCOM** shall include provisions in inter-service support agreements (ISSAs) with DLA for DLA/DRMS/Defense Reutilization and Marketing Offices (DRMO) support of PCB requirements Navy-wide.

**11-6.3 Chief, Naval Education and Training** shall develop and provide training on the occupational safety and health aspects of PCBs to Navy personnel as appropriate. Where possible, integrate this training into existing required curricula.

### **11-6.4 Major claimants and subordinate commands shall:**

a. Ensure compliance with applicable requirements, including PCB management at government-owned/contractor-operated (GOCO) facilities.

b. Ensure that all activities develop and implement PCB Elimination Plans and that funding is programmed to meet the goals of the elimination plans. At a minimum, program funding to ensure compliance with all applicable regulations and Navy goals for elimination of PCBs.

### **11-6.5 Commanding officers of shore activities shall:**

a. Budget, fund, and manage PCBs in full compliance with applicable Federal, State, and local PCB laws and regulations.

b. Sign and submit, as appropriate, reports and other required data to EPA, State, or local agencies.

c. Ensure the training of personnel involved in PCB operations per paragraph 11-5.5.

d. Transfer accountability and custody of PCBs and PCB items stored for disposal to DRMO, insofar as possible.

e. Handle, store, mark, inspect, and assess risks of PCBs and PCB items according to applicable Federal, State, or local regulations. With regard to PCB transformers and PCB contaminated transformers:

- (1) Inspect for PCB leaks
- (2) Repair all leaks
- (3) Maintain records
- (4) Provide notification to EPA.

f. Inventory or validate all PCBs and PCB items annually per procedures required by regulatory agencies. Maintain records of testing for PCB concentrations in hydraulic systems, heat transfer systems, and converted or reclassified transformers for the life of the equipment (through disposal).

g. Report PCB spills or incidents involving combustion as prescribed in Chapter 10 when the spill exceeds the reportable quantities established in Federal regulations. Report fire-related incidents involving PCB transformers immediately to the NRC, regardless of quantity.

h. No later than December 28, 1998, all owners of PCB transformers, including those in storage for reuse, were required to register their transformers with the Environmental Protection Agency in accordance with reference (a). A transformer owner who later discovers a PCB transformer must register the newly identified PCB transformer, in writing, with the Environmental Protection Agency no later than 30 days after it is identified as such. This requirement does not apply to transformer owners who have already registered PCB transformers and are located at the same address. Further, it is recommended that all PCB transformers and equipment be registered with cognizant fire departments.

i. Develop and implement a PCB Elimination Plan in compliance with Federal, State, and local PCB regulations. Update the plan on an annual basis and send updated information to the major claimant no later than 31 May of each year.